

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006084**Date Inspected:** 26-Feb-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Fabrication**Summary of Items Observed:**

CWI Inspectors Mr. Zhong An Liu, Mr. Chen Ying Xin

On this date CALTRANS OSM Quality Assurance (QA) Inspector Mr. Paul Dawson arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

**Tower Bay 10**

This QA Inspector performed random ultrasonic (UT) inspections of approximately 20 percent length of North Tower Lift 2 Skin D welds NSD1-SA166E/F-12, NSD1-SA166E/F-15, NSD1-SA166E/F-28, NSD1-SA166E/F-31, NSD1-SA166D/F-13, NSD1-SA166D/F-16, NSD1-SA166D/F-29 and NSD1-SA166D/F-32. These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel and the welds are listed on ZPMC Notification of Witness Inspection document 002074. The QA Inspector observed the welds that were ultrasonically inspected by this QA Inspector appears to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

This QA Inspector performed random ultrasonic (UT) inspections of approximately 10 percent length of welds SSD1-FASA3-1A/E-1, SSD1-FASA3-1A/E-3 and SSD1-FASA3-1A/E-4. These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. The QA Inspector observed the welds that were ultrasonically inspected by this QA Inspector appear to comply with AWS D1.5 UT requirements. For

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additional information on these inspections see the TL6027 Ultrasonic Test Report.

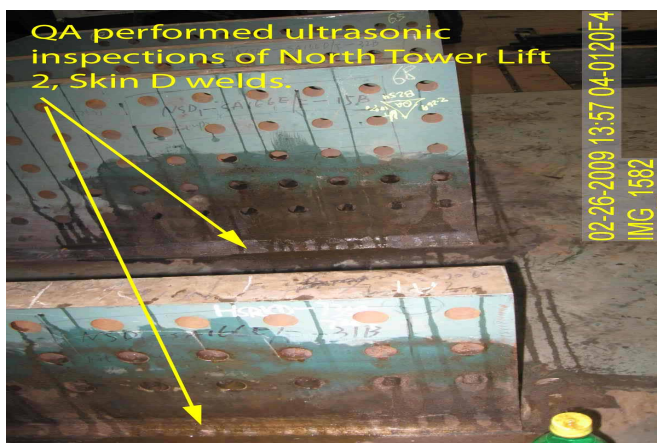
This QA Inspector observed ZPMC welder stencil 040491 is using shielded metal arc weld welding process WPS-345-SMAW-3G(3F) to butter weld the end of north tower shear plates per T-WR926-626. The QA Inspector observed the base material had been preheated using a torch. The QA Inspector observed ZPMC Quality Control personnel measuring a welding current of approximately 152 amps. Items observed by this QA Inspector appear to be progressing in compliance with project specifications. See the photograph below for additional information.

This QA Inspector observed ZPMC welders Mr. Zhang Sun Lin, stencil 057266 and Mr. Liao Yanfe, stencil 066398 is using flux cored welding process to make stiffener plate welds to tower skin plate NDS1-SA223-D/E. The QA Inspector observed the base material had been preheated using an electrical heater element. The QA Inspector observed ZPMC Quality Control Inspector Mr. Zhong An Liu monitoring this welding. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welders Ms. Wu Zhi Zhong, stencil 057180 and Ms. Dng Yumei, stencil 054069 is using flux cored welding process to make stiffener plate welds to tower skin plate NDS1-SA223-E/E. The QA Inspector observed the base material had been preheated using an electrical heater element. The QA Inspector observed ZPMC Quality Control Inspector Mr. Zhong An Liu monitoring this welding. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

### Tower Bay 11

The QA Inspector was informed by QA Inspector Mr. William Clifford that ZPMC installed skin plates A and B on East tower Lift 1 prior to inspections of the stiffener to skin plate welds of these to skin plates and that ZPMC is ready for Caltrans QA Inspection of the skin plate stiffener welds. This QA Inspector performed random visual inspections of skin plates A and B on East tower Lift 1 and observed eight areas that require grinding. Later in the shift the QA Inspector observed the eight areas had been ground and the stiffener to skin plate welds of skin plates A and B on East tower Lift 1 now appear to comply with project specifications.



### Summary of Conversations:

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See above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod phone: 134-8257-0045 , who represents the Office of Structural Materials for your project.

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| <b>Inspected By:</b> | Dawson,Paul      | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Clifford,William | QA Reviewer                 |

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